ARIZONA ANTIQUE RADIO CLUB NEWS

Vol XIX, No 4 Winter 2002

3 AARC News

6 David Edward Hughes: an Inventor of Wireless Telegraphy *by P.A. Kinzie*

10 Cover Story: "Arkay" Radiohorn Mystery *by Clyde Watson*

12 Grenet Cell found at Ghost Mine *by Les Rayner*

14 "Buy" the Pound *by Shirley J. Strapach*

16 Radio Memories *by Bob Reek*

18 Ken Krol: Creating Magic from Junk

20 Photo Review: Last Half of 2002

ARIZONA ANTIQUE RADIO CLUB NEWS

Vol XVIX, No 4 Winter 2002

Arizona Antique Radio Club
www.azarc.org

The Arizona Antique Radio Club was organized in 1983 for the preservation of the history and artifacts of radio and television, and for the advancement of knowledge and appreciation of radio technology and communication. The Club is a non-profit corporation organized primarily for the mutual assistance of radio devotees and collectors in Arizona. Membership, however, is open to any persons who have an interest in radio and television history, preservation, restoration, and collecting.

Meetings are held from October through May and consist of touring collections, presentations of technical, historical or restoration information, thematic displays of radios and the autobiographical experiences of the members. Our antique radio Swap Meets are scheduled for Spring and Fall meetings. Members of the Board of Directors are elected at the annual business meeting in May. Most meetings are held on Saturdays in the Phoenix and Tucson areas, and when possible, elsewhere within Arizona.

Membership dues are $18 (individual) or $20 (family) per calendar year and provide access to all club benefits including the quarterly issues of the *Radio Club News*. Send dues or membership inquiries to: **Arizona Antique Radio Club, 1820 W. Raven Dr., Chandler, AZ 85248, phone 480-855-1282.**

The Arizona Antique Radio Club News is the publication of the Arizona Antique Radio Club, Inc. It is mailed First Class to current members.

Contributions: submission of articles, news items, fiction, photographs and other materials relating to radio history and collecting are greatly appreciated, particularly if they have an Arizona connection. All members are encouraged to broaden their interest in the hobby by sharing their experiences, opinions, knowledge and observations with the club through its publication. Send materials for publication to **Arizona Antique Radio Club, 2025 E. La Jolla Dr., Tempe, Arizona, 85282-5910. Phone is 480-730-6058**. Email: **lettow@yahoo.com.**

Entire contents copyright © 2003 by Arizona Antique Radio Club, Inc. unless otherwise indicated. All rights reserved. **Please contact the Editor for permission to reprint articles or artwork in other publications.**

***Radio Club News* Contributors:**

Joel L. Ekstrom	Harry Hyder
P.A. Kinzie	Les Rayner
Bob Reek	Carl Roberts
Shirley Strapach	Clyde Watson

Editor: Bill Lettow

2002-2003 Board of Directors

President:	Dennis Craft	480-860-8951	dcraft@qwest.net
Vice-President:	Carl Roberts	480-998-0680	tswcarl@netscape.net
Secretary and Webmaster:	Jeff Shields	480-855-1282	jeffandkt@msn.com
Treasurer:	Steve Smith	480-831-3095	radio747@yahoo.com
Editor:	Bill Lettow	480-730-6058	lettow@yahoo.com
Directors:	Stephan Lew	520-881-0385	slew2969@aol.com
	Con Morton	602-996-8912	corneliusm@cox.net
	Jeff Thomas	480-926-6156	jthomas@amug.org
	Pete Way	602-840-7184	bakeapple@juno.com

A.A.R.C. NEWS

BOARD PROPOSES CHANGES

At meetings of the Board of Directors this summer, plans were made to amend our bylaws. The need for change centers around the bylaws' current specification that the Annual Business Meeting and Elections be held in the month of May. May has always been a problematic month for the club in terms of meeting attendance, and this has been a hindrance to election of Board Members.

Consequently, the Board is proposing the following changes, to be voted on by the entire club at our October meeting:

- The Business Meeting will be moved from May to October, at which time nominations to the Board will be accepted.
- Elections to the Board will take place by ballot at the Fall Swap Meet in November, always our most well-attended event.
- The newly elected Board will meet before the end of the calendar year to elect officers from among its members.

The Board is hoping to generate interest in leadership from within the ranks of the club. In the past most members have been unaware of elections. By moving them to our most popular event, this issue gets moved front and center.

JOIN THE BOARD

This year the two-year terms of Board Members Bill Lettow, Steve Smith and Jeff Thomas expire. Bill has been serving for more than ten years, Steve for more than eight years and Jeff for two years. Other members of the Board, who aren't up for election this year, have also served for considerable lengths of time. Dennis Craft for instance, has been on the Board and has been a club officer for ten years.

If you could devote some time and energy to the club, this would be a great time to nominate yourself to the Board. The Board meets about three times a year to plan and conduct business. Board Members help out at regular meetings, this being nothing too difficult or time-consuming. The main thing is that the Board now needs people who can bring some new ideas and perspectives to the club. Think about it, and make a move.

RADIO CLUB NEWS PUBLICATION SCHEDULE TO CHANGE

This issue, the last of 2002, marks at least the temporary end of our quarterly publication schedule. Until circumstances change, the *News* will be reduced to one or possibly two issues per year, depending, as always, on the contributions of articles from club members.

For once the problem isn't money. Twenty years ago, when the club was formed, the journal was created as a place for members to share their stories, advice, research and knowledge. Throughout the years this has been a very successful endeavor for the club;

the journal received high praise from many in the national antique radio community as well as from our own club members.

But the journal was intended to be, and has always been, the expression of the club members, not the just the individual efforts of the Editor, and currently not that many members are expressing themselves in the form of articles. There are numerous reasons for this, and our club is not alone in seeing this activity taper off.

For those of us who started collecting 20 years ago or more, there has been an explosion of information on old radios. The first real book for collectors, Morgan McMahon's *A Flick of the Switch*, was published in 1975, and being the only thing out there, was a revelation. That and our *Radio Club News* was all we had for years. Now there are so many books, pictures, websites and publications that the mission of a journal like ours may seem less important.

Like it or not, the energy of many collectors has moved from club meetings and swap meets to the internet and waiting for the UPS driver. It is only natural then that collectors look online first for information. Email and websites like ours at www.azarc.org are proving to be better for communication than a quarterly publication with a somewhat erratic schedule.

Then there is the passing of the generation of radio pioneers. Many of the stories published in the earlier years of the journal were from these men who were around when radio was going through its heady years of technological progress and world-wide growth. They were there when radio changed from hobbyist thrill to household appliance, and then went to war. While good radio stories can come from any generation, and have, this pioneer group was better than we are at writing it all down.

On a personal note, I have been editor since Spring of 1994 and have produced 36 consecutive journals, each one consuming several weekends of my time. I'm not ready to resign from the job yet, and no one has expressed an interest in taking it over. But it has become increasingly difficult for me to adhere to any kind of normal publication schedule, which the club should reasonably expect. I'm busy like everyone else, and would also like to have some time to actually work on a radio!

One suggestion is to drop the fancy journal and produce a simple, timely bulletin of one or two pages of news and meeting information. I think we already have a website, well managed by Jeff Shields, that fills this need nicely. Another suggestion is that the *News* simply become an online publication, dropping altogether the physical booklet. This would of course save printing and mailing costs but it doesn't address the central problems of the lack of articles or the time constraints of the current editor.

I feel strongly that you, like me, want to have a printed journal, at least for the foreseeable future. And we will continue to have them whenever we have gathered enough material to make them worth the effort of production and worth the effort of reading.

OCTOBER FAMILY POTLUCK SHOW 'N TELL AND ANNUAL BUSINESS MEETING

Saturday October 4, 3pm
Home of Dennis Craft
10513 E. Clinton, Scottsdale
(Clinton is one block north of Shea at Via Linda)

Bring Food, Chairs, Family and Show-'n-Tell Items
Win Door Prizes. Info: dcraft@qwest.net, 480-860-8951

Saturday
November 8,
8am

Antique
Electronic
Supply
Tempe

AARC FALL SWAPMEET XXI

New this year - A Phenomenal Members-Only Free Raffle

Coffee - Donuts - Hotdogs!
Open to the Public for Buyers, only AARC Members can sell, but you can join or pay your dues at the meet.

Auction - around 10am - 10% of sales go to the club, reserves allowed, items donated to the club for auction appreciated.

A.E.S. will be open for business but they ask that orders be phoned in or placed online during the week before the meet.

No one is allowed on the lot before 8am. Also, please don't park on the Qwest side of the parking lot. Info: tswcarl@netscape.net, 480-998-0680

David Edward Hughes

an inventor of Wireless Telegraphy

by P.A. Kinzie

David Hughes had an unusual background, compared to other 19th century British scientists and inventors. Although born in London in 1831, he spent his early years in the United States, becoming a professor of music. His interest in music led him to study the physics of sound, and this resulted in a career change in the direction of science. He also showed inventive talent by developing a telegraphic printing machine, which came into general use in both the United States and Europe.

Later he returned to England, where he worked in his own laboratory, and in 1878 he invented an early form of microphone. He is remembered more for that invention than for his work with wireless telegraphy, which came a year later in 1879.

He was studying properties of metals at that time, and his apparatus included a clockwork driven interrupter that opened and closed an inductive circuit. He noticed that a loose connection in another part of the electrical system produced clicking noises in an earphone. During his investigation of the noises, and of the role played by the loose connection, he found that the clicks persisted even when the electrical connection between the interrupter and the earphone circuits was removed.

By that time, he had replaced the loose connection, trying several simple devices, which in modern terminology are called imperfect contact detectors. One of the microphones that he had tested a year earlier was the most sensitive of all when used as a detector. He also discovered such refinements as grounding the interrupter, i.e., the transmitter, and connecting a battery in series with the detector and earphone, which improved the sensitivity of the receiver. Hughes' detector was an invention in itself. It came into brief use at a much later period during the early 1900s, and is known today as the microphonic detector.

During his experiments with detectors, Hughes just missed inventing the coherer, the first widely used detector during the age of wireless, which was still years away in the future. It is ironic that the microphonic detector did not come into use with the first generation of commercial wireless equipment, since it was more efficient than the coherer. In fact, it was not even realized at first how insensitive the coherer actually was, because there was no simple way available to measure its performance. Hughes' use of an earphone rather than automatic recording on paper tape was also far ahead of its time, because the advantages of a human operator were not appreciated at first.

Hughes' results were not unique, even at the early date of 1879, when judged simply in terms of transmitting electrical signals without the use of wires. There were two recognized methods of such signaling, plus other cases where positive results had been claimed, but with explanations that remain unclear to this day. One of the methods that was understood in principal depended on conduction of electrical current through the ground or water. Another depended upon the inductive coupling of long pairs of wires or large coils (the transformer principle). Distances of well over a mile had been reached in both cases, and inventors were currently attempting to increase that range of transmission.

Superficially, the system developed by Hughes appeared to operate by induction, but he was convinced that it was depending upon what we now call electromagnetic radiation. He had observed that with his apparatus, each click in the earphone coincided with a spark at the interrupter when the circuit was broken. He believed that (using his terminology) invisible electric waves were produced with each spark. Unfortunately for Hughes, at least three demonstrations failed to convince invited observers that he was using a novel method of transmission. As one of his fellow scientists commented at the time, nothing was demonstrated which could not have been explained in principle by induction.

Hughes may not have demonstrated the range of his system to his witnesses. He seems to have been more interested in establishing its principle of operation than investigating some of the practical considerations. Also, he may have been unaware of an important limitation on the range of the induction method, which was the case with some of the inventors that

were working upon its improvement. A comparison of the ranges of the two types of system would have produced evidence favorable to Hughes.

The maximum useful inductive transmission distance, between transmitter and receiver antennas consisting of two parallel wires of equal length, is only of the same order-of-magnitude as the wire length itself. This distance is even less when one wire is shorter than the other, or if they are not parallel. The same is true when metal screens, plates, or the circuit wiring itself is used as an antenna. This limitation could have served as good evidence against the induction method, in view of the fact that Hughes included tests with the receiver located outside of the room housing his laboratory.

He has been described as picking up the receiving apparatus and listening to the clicks in his earphone while walking along the street. In one instance, he heard signals at a distance of 500 yards from the transmitter. Considering the small dimensions of his receiver, in effect the first portable radio, use of radiation is best explanation for a range greatly exceeding the dimensions of the antenna system.

Regrettably, Hughes either did not include range tests in his formal demonstrations, or if he did, the negative opinions of his observers remained the same. As a result, he was so disappointed with a uniformly unfavorable response that he did not publish his results for many years. Further, he made no effort to develop practical applications of his invention. Of course it would have been an uphill struggle in any event, since Maxwell's electromagnetic theory was still new and with no experimental verification on record. This would be accomplished by Heinrich Hertz some nine years later, with Marconi's practical applications nearly two decades in the future.

Hughes' reputation was not affected by the rejection of his efforts. In fact, he maintained a good relationship with his peers, and he later became a member of the Royal Society of London. After many years, it was generally acknowledged that he had used the radiation method well in advance of verified work by other investigators. Eventually his notes and surviving experimental apparatus were placed in a British museum.

Bibliography

1.) Blake, George G., *History of Radio Telegraphy and Telephony.* Arno Press, New York, 1974. Reprint of the 1928 edition by Chapman and Hall, London.

2.) Demerseman, Pierre, and Richard Foster, "The First Spark". *Antique Radio Classified*, Vol. 15, No. 6, June 1998, p. 4.

3.) Dunlap, Orrin E. Jr., *Radio's 100 Men of Science.* Books for Libraries Press, Freeport, New York, 1970, p. 63. Reprint of the Harper and Brother's Edition, copyright 1944.

4.) Pierce, George W., *Principles of Wireless Telegraphy.* McGraw Hill Book Co., Inc., New York, 1910.

Report to the State of Arizona Corporation Commission The Arizona Antique Radio Club, Inc. File #0250531-4

Financial Disclosure:

Statement of Cash Receipts and Disbursements
Year ending December 31,2002

Beginning cash balance; January 1,2002	**$4124.41**
Receipts:	
Membership Dues	$3205.00
Swap Meets, consignments, misc.	$389.65
Total Receipts	**$3594.65**
Disbursements:	
Publishing, mailing of quarterly journal & related expenses	$1264.35
Liability Insurance	$480.00
Miscellaneous expenses	$740.34
Bank Fees	$75.81
Check Order	$16.20
Web Site Fees	$149.69
Arizona Corporation Commission fee	$10.00
Total Disbursements	**$2736.39**
Ending cash balance; December 31,2002	**$4982.67**

Stephen L Smith, Treasurer

"Arkay" Radiohorn Mystery

By Clyde Watson

Bob Bakinowski displayed an interesting piece at our October 2002 meeting and I had a chance to look for the January, 1922 *Radio News* clipping that Bob had to go with the piece. I didn't have that issue, but I think I have what Bob has from that magazine, which is a copy of an ad and not an article (see next page).

Floyd A. Paul has a picture of the Riley-Klotz "Arkay" speaker in his book *Radio-Horn-Speaker-Encyclopedia*. There is no other information there except for listing it as Riley-Klotz Co. (Company) and repeating it in the index. A Thomas Wilson of Los Angeles, California is given as the source of the photo, probably a collector, but that is all.

Earlier, before the publication of this book, Paul had sold a scrapbook compilation of photocopied ads and such. In that grouping there is an ad for the Riley-Klotz speaker, offered by Ship Owners Radio Service, Inc. of 80 Washington Street, New York City. In part it reads, " Arkay Radiohorn. Make your own loud speaker. Simply insert any standard phone. Baldwin Type 'C' Unit recommended" Then, someone, I assume Floyd Paul, has written on the ad "Radio News, Jan. 22, p669"

I can not find any other information such as articles about a Riley-Klotz company in the indexes that

I have for *Patterson's Radio Age*, or for *Antique Radio Classified*, and no such company is listed in the August 1925 *Radio Trade Directory*. This latter directory references all known makers of radio sets and parts of the time. I have to assume, therefore, that this speaker was a one-shot offering; a marriage of an existing auto horn with a base in which the buyer could complete as a radio speaker by adding an ear phone.

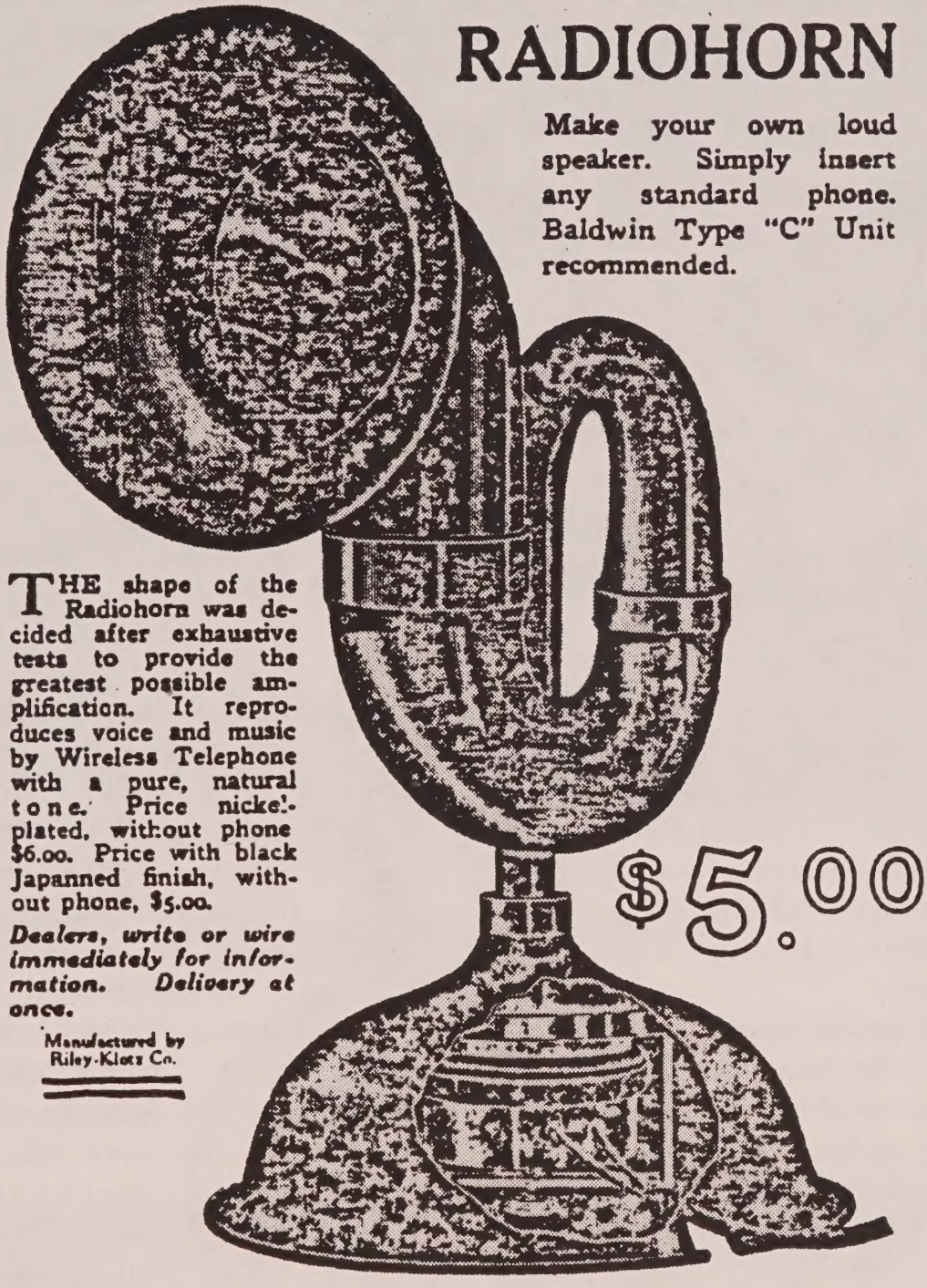
It would appear that the only thing else one might find on this would be another ad or so, probably by the same dealer (rather than the company) in some other 1922, or maybe 1921, publication. It doesn't appear in the December 1922 *Radio News* which is the only issue I have of that era.

Antique Radio Classified does show two entries for this speaker in its "Photo Review" section, one for May 1986 and another for January 1998. These are submissions by collectors, but that is all I can find - at least at the moment and I doubt that any article or other information exists on what appears to be a blip in radio offerings.

"ARKAY"

RADIOHORN

Make your own loud speaker. Simply insert any standard phone. Baldwin Type "C" Unit recommended.



THE shape of the Radiohorn was decided after exhaustive tests to provide the greatest possible amplification. It reproduces voice and music by Wireless Telephone with a pure, natural tone. Price nickel-plated, without phone $6.00. Price with black Japanned finish, without phone, $5.00.

Dealers, write or wire immediately for information. Delivery at once.

Manufactured by Riley-Klotz Co.

$5.00

SHIP OWNERS RADIO SERVICE, Inc.

Wholesale Distributors — Dealers Wire

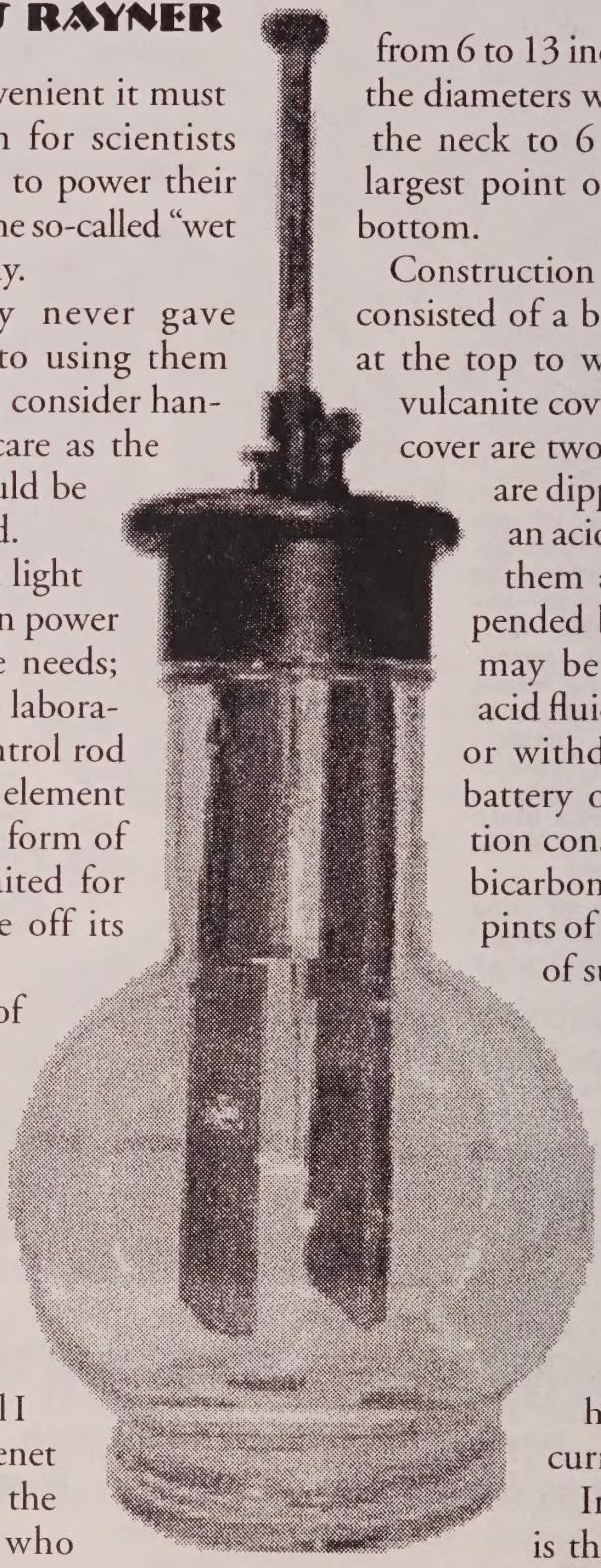
80 Washington Street New York City

RADIO NEWS JAN, 22 P669

SORSINC

GRENET CELL FOUND AT GHOST MINE

BY LES RAYNER



How inconvenient it must have been for scientists in the early 1900s to power their experiments with the so-called "wet batteries" of the day.

They probably never gave another thought to using them even if they had to consider handling them with care as the chemicals used could be dangerous if spilled.

Today we have a light switch that turns on power for our immediate needs; these people in the laboratory adjusted a control rod that held a carbon element immersed in some form of electrolyte and waited for the battery to give off its power.

Many variations of these wet batteries were available at the time but one particular battery that interests me most is one I have in my radio collection.

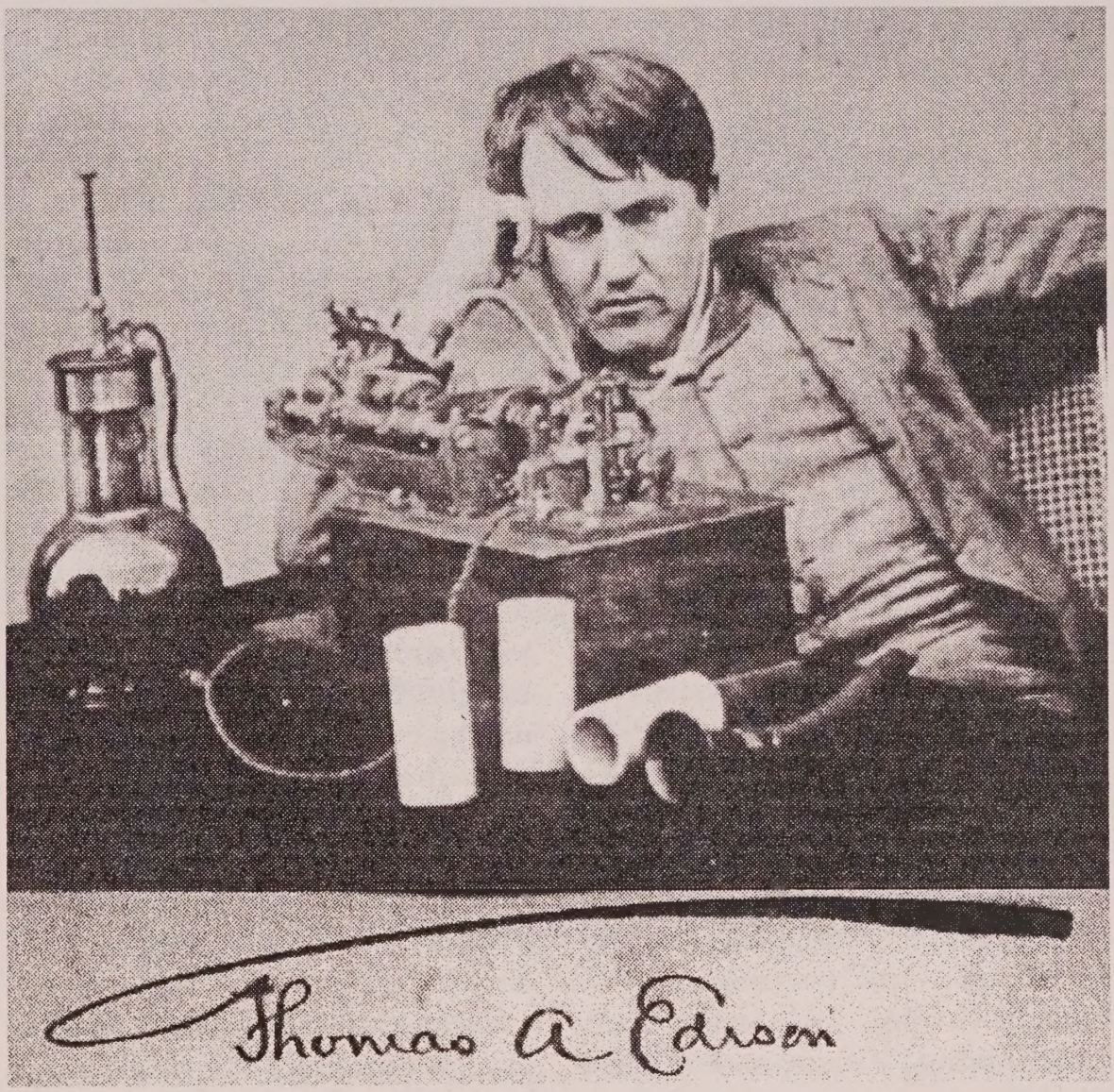
The battery or cell I have is called a "Grenet Cell" named after the French professor who invented it in 1885.

The physical size of these bottle shaped cells or glass containers ranged from 6 to 13 inches in height while the diameters were 3 1/2 inches at the neck to 6 1/2 inches at the largest point of the globe at the bottom.

Construction of the Grenet Cell consisted of a brass frame or band at the top to which is fastened a vulcanite cover. Attached to this cover are two carbon plates that are dipped permanently in an acid solution. Between them a zinc plate is suspended by a brass rod that may be lowered into the acid fluid to increase power or withdrawn to shut the battery off. The acid solution consists of 4 ounces of bicarbonate of soda, 1 1/4 pints of water and 3 ounces of sulfuric acid.

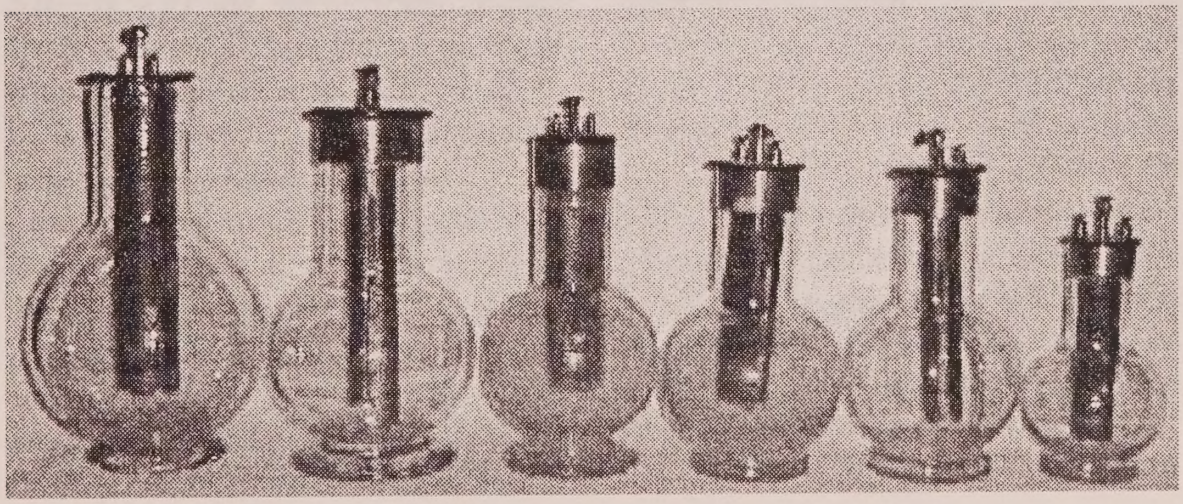
The cell was used mainly for laboratory experiments and to work mechanical equipment. The power generated was 1.9 to 2.1 volts and is said to have had a strong current.

Interesting enough is that the Grenet Cell was a favorite of Thomas Edison for many of his experiments including the working power for his



Class M phonograph invented in June 1888.

This cell is considered a rare find, especially to find it so close to home. I found it at a buy and sell outfit in Globe, Arizona called "The Ghost Mine". Some of you may have visited this place.



"Buy" the Pound

by Shirley J. Strapach

Sometimes it's funny how things fall into place. Just last week, Steve and I were having a discussion about Victrola needles, and the fact that they came 100 to a package. The reason being that you could only use a needle once and then it had to be sharpened with a needle cutter. This was something new to us, as we had never seen one.

As luck would have it, I sat down to eBay one morning after Steve left for work. I brought up Radios, then hit Going, Going, Gone. Lo and behold, what should appear before my eyes, but a Fibre Needle Cutter, just what he wanted. Only two minutes left. Could I do this? Let's give it a try. I had nothing to lose, so I did it. I WON!

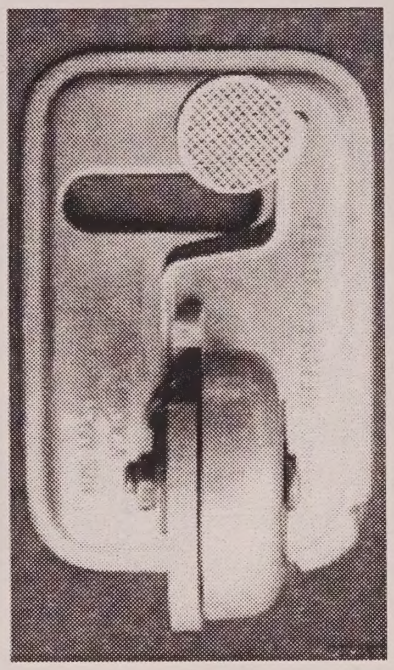
But I failed to read the small print. It's in North Wales Coast. Steve was asking about that the other day. I wonder if this is what he saw. I remember him saying that he wondered about the shipping costs from there. To make a long story short, my Englishman wanted to be paid in Pounds Sterling.

As a radio collector's wife, I wanted to surprise Steve with the needle cutter for Christmas. Keeping all of this on the Q.T. would be a challenge. By now, the adrenalin had started flowing. Everything had to be absolutely secret. But I needed a little help if I was going to pull this off.

Enter George Fathauer! Having been in his shop a number of times, I knew he shipped all over the country, and possibly abroad. So I gave him a buzz. Thankfully, he led me in the right direction. Since I had no idea how to go about getting pound sterling, he suggested I try my local bank. So I did. But they couldn't do much, except forward me to International, which is a company that deals in foreign exchange. I had a nice conversation with Chris, who explained how this worked. I could order a money order from him or go through my bank. Ordering a money order from him would take a week to ten days. I explained the situation to him and he advised me to go to the bank, since eBay had to be paid in 10 days. He explained that there are only a few branches that could convert to foreign currency. The Wells Fargo branch I needed was at 23rd Avenue and Northern.

This meant I would have to take the car one day, since Steve drove to work daily. I made up an excuse that I had to take the dog for his shots, which I did. The next step in this little surprise was to pay a visit to the bank. The teller was at a loss as was the manager. But I was then directed to Kaye Densley, who knew exactly what I needed. The bid was for 37.95 in pounds, at a rate of 1.607100 ($60.99 U.S. dollars), which included 3 pounds for ordinary airmail, and 2.60 pounds on top of this for recorded delivery. The

Steve dreams of a needle cutter for Christmas...



fee from the bank to do this transaction was $15.00, for a grand total of $75.99. Upon leaving the bank, I had foreign draft in my hands, made out to: Tom Blamire to be cashed at LLOYDS OF LONDON. For a small town girl, this was quite an exciting experience.

On the way home, I stopped and made copies of it, just in case, and dropped it off at the post office. Postage there was another $1.00. When I reached home, I emailed Tom that the money was on the way.

Everything was fine! He didn't suspect a thing. How long could I keep this up? I had been hiding all our correspondence in files, so he wouldn't suspect anything, but one day the inevitable happened. I was at the computer checking out the messages that just came in, when an email from Tom popped up, just as Steve was walking by. "What's this about a Fibre Needle Cutter"? he said. "Oh no", I exclaimed. The jinx is up! He found me out! "It's your Christmas Present", I exclaimed. He said, "Thank you, but you'll just have to find something else to surprise me with". Oh No! Here we go again!

When it finally did arrive, we weren't home, so we had to go to the post office to pick it up. We brought it home to open. Tom had said that his method of wrapping was a bit unorthodox and we didn't understand at first. The outside of the package was stamped "ROYAL MAIL". That wrapping was removed to reveal yet another envelope. When that was removed, there in my hand lay what appeared to be a large plastic pill bottle, with tape wrapped all around it. "What was this?" After further investigation, I saw that there was a splice in the sides of the bottle. It took a knife and sliced the tape, took off the cap and pried open the bottle. There nestled in a bed of bubble wrap lay the needle cutter.

Of course, it was "HIS MASTERS VOICE"!

Radio Memories

by Bob Reek

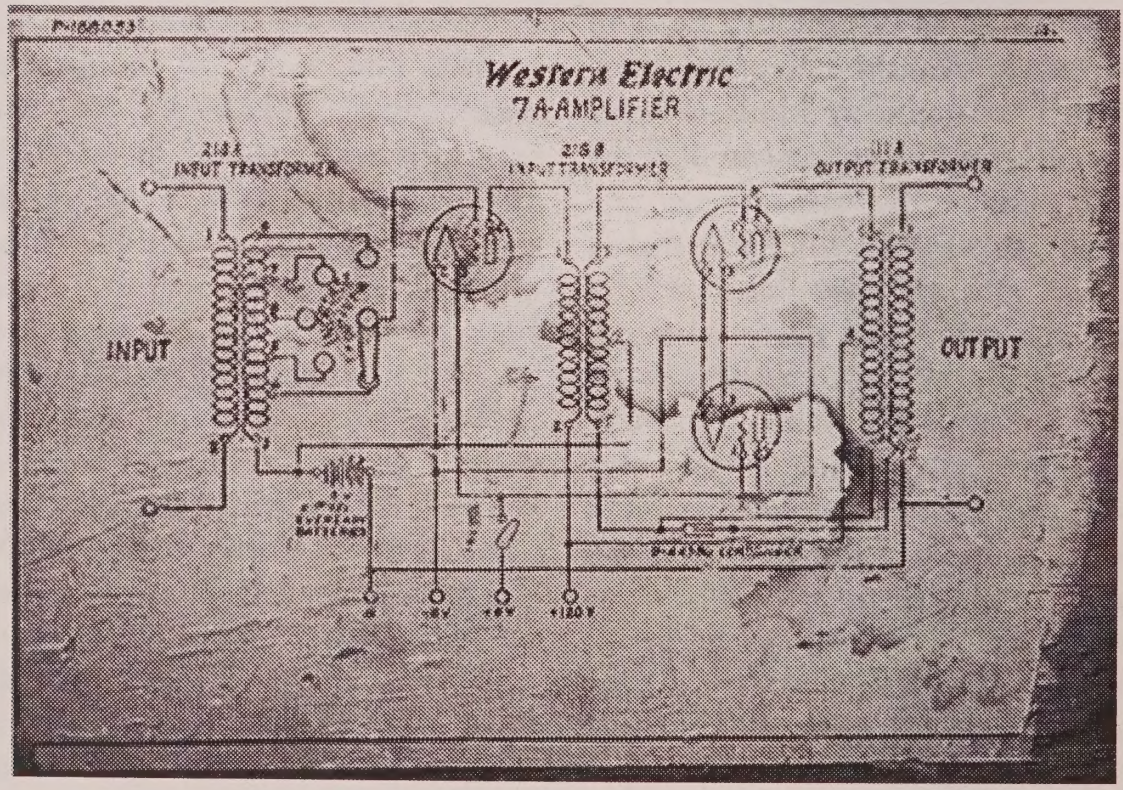
My Old Western Electric Amplifier

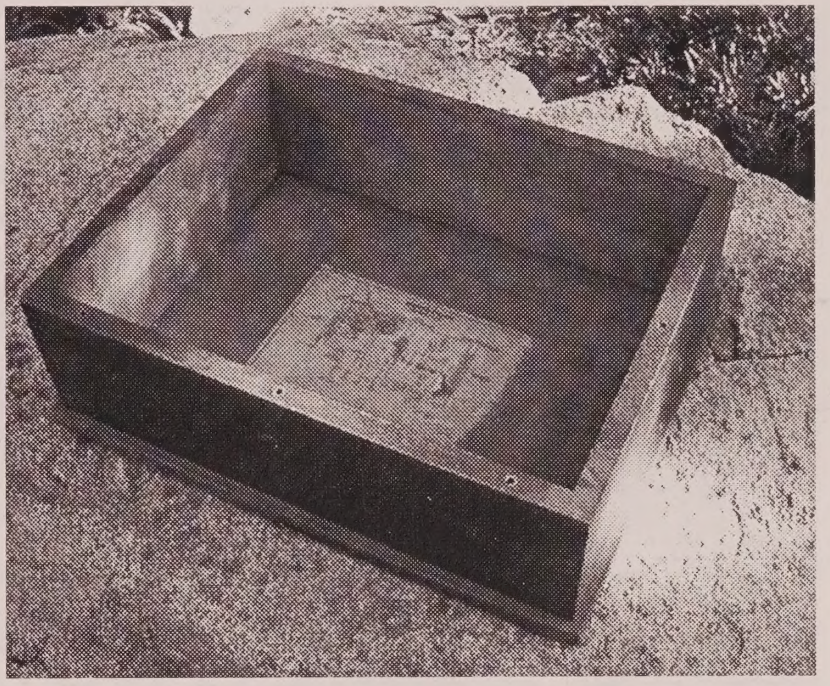
Western Electric manufactured the 7A Amplifier described by the circuit diagram below. I'm guessing that it was built in the 1920s and sold to the public for home use. The amplifier was mounted "breadboard style" to a one-half inch thick piece of black Bakelite or phenolic 9 3/8 x 12 inches. The Bakelite support was screwed to the top of a mahogany box, shown at right. Its dimensions are 9 3/8 x 12 1/2 x 4 inches deep. (The bottom of the box protrudes 1/4 inch all around.) The box is nicely made with finger joints at all four corners. The surfaces are coated with varnish and the amplifier schematic is glued inside on the bottom of the box.

A limited warranty notice is glued to the bottom of the box. It is badly worn, but is still partly readable. Following is what can still be read, (with some judicious guesses for words in the missing gaps). The number 99818 identifies the notice.

------which the manufacturer has---------- only for certain specific uses. Said a--ara---(warranty) its several component parts are sold ---------- for use only as a Western Electric Loud Speaker Telephone (Amplifier) and not for connection with any public (or private) telephone or telegraph (network).

A friend of the family gave the amplifier to me about 1938 when he learned that I had built a crystal set and was interested in radios. He had used it to amplify the sound from his crystal set and drive a loud speaker. I





don't know where he purchased it.

I operated the amplifier a couple of times with my crystal set. I used a homebuilt power supply for the 120 volts plate supply and flashlight batteries to supply the -9 volts grid voltage, but never had a six volt automobile battery to operate the filaments. My power supply delivered 6 volts ac power to the filaments and the hum produced by the amplifier was very audible and objectionable.

The tube types are not marked on the schematic. I remember 200 or 210. Perhaps some of the tube collectors will recognize this application.

I kept the amplifier on my radio bench for many years. Then being about seventeen and knowing "everything" I decided to junk this museum piece, keeping only the mahogany box. Darn!

A Three-Tube FM Set

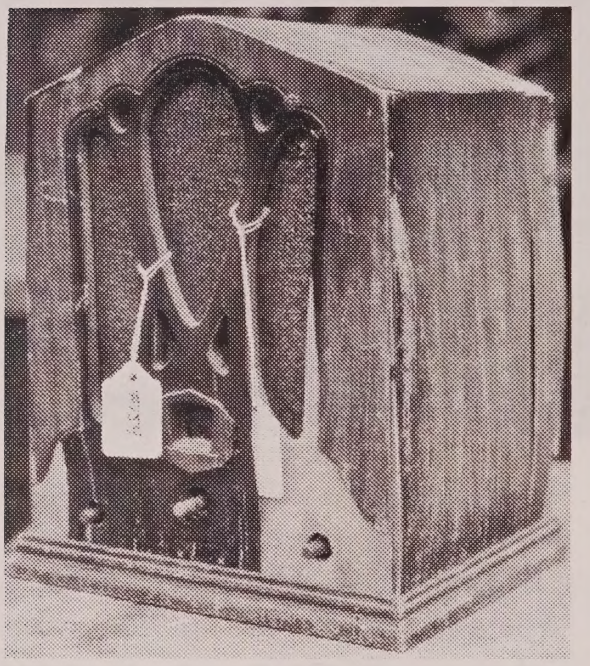
I belonged to a Radio Fraternity at the Illinois Institute of Technology in the 1940s. One day, someone brought a schematic of a one-tube FM receiver that used common parts and a 6SA7 tube. Since I was going to college, I didn't have extra funds for a real FM receiver, but I did have a 6SA7 tube in my junk box.

The 6SA7 was normally used as a RF mixer and oscillator to produce the IF frequencies for further amplification in a superhet receiver. The circuit showed the tube wired as a super-regenerative receiver, receiving FM signals directly from the antenna, and producing an amplified audio signal ready to drive the final amplifier tube powering the speaker. The FM band in those days was in the 40 megahertz range.

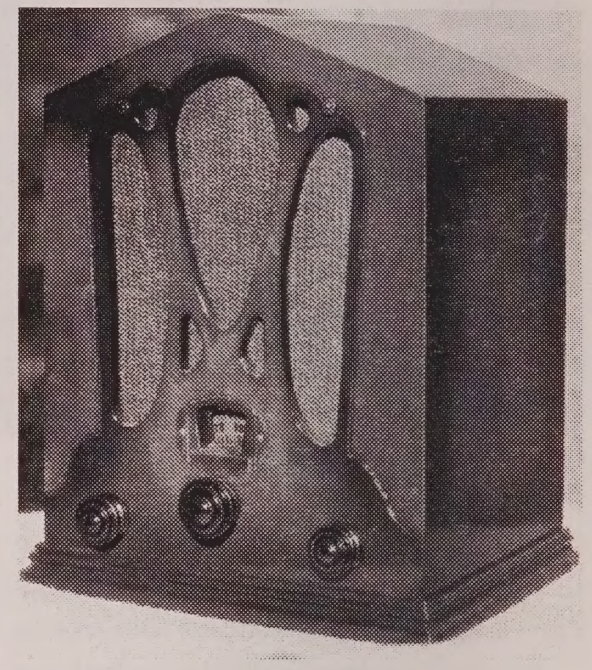
I installed the three-tube radio (6SA7 regenerative detector/amplifier, 6V6 power amplifier, and 80 power supply tube) in an old table top cathedral cabinet. The radio worked well producing clear sound, but tuning was critical. I listened to WEFM, Zenith's station that I think was the only FM station in the Chicago area at the time. I used it for a year before I went into the Navy. Sometime later, the FM band was moved to its present location, but I never changed the coils to receive signals from this new band.

Perhaps a reader is familiar with this circuit and will supply a copy for a future issue.

Ken Krol: Creating Magic from Junk



Before - Severely water-damaged Los Angeles-built mantel set still had active mold growing between the plywood layers.



After - The set looks like it came right out of the manufacturer's crate ready for the store shelf.

"It all started 12 years ago with a plain 1946 Electronic Labs radio I picked up at an antique auto swap meet," says Ken Krol. It was a radio clearly in distress, but even then, Ken liked a challenge. He applied the knowledge gained from his cabinet-making degree to re-veneer the cabinet, and his self-taught expertise in vintage electronics to bring the set back to life.

Joining the Arizona Antique Radio Club opened up a previously unknown world of people to share his growing interest, as well as many opportunities to acquire more sets. 120 radios later (his collection and customers' sets), Ken is still turning out museum-quality restorations.

"In the early days, Debbie (his wife) and I bought some pretty rough radios due to financial straits," says Ken. "But I quickly found the great personal satisfaction of turning a radio sold as a 'parts set' into an object of beauty was worth more than the money we saved."

Asked about his philosophy on a cabinet's post-restoration appearance, Ken states, "A radio is only original once, and everything possible should be done to save the original finish and look. However, as we all know, there are many that are impossible to save.

"There is nothing sadder than to go into an antique store and see a

once glorious multi-hued wooden radio stripped to a monotone of clear polyurethane by an ignorant antique dealer," says Ken. "It does cost more to get a proper restoration, but my customers' sets go home with the correct toning, shading, paint stripes and color. Attention to all the tiny details is what makes a radio a standout in a person's collection."

BLUEBIRD RADIO TUBES

— are powerful — sensitive for distance, give clear volume and long service.

GUARANTEED

to work in Radio Frequency, Neutrodyne, Super Heterodyne and Reflex.

WITH BAKELITE BASE

Type 401A
Type 400
Type 499
Type 412

$2.00 All Standard Types

Also 499A with Standard Base 202-5 Watt Transmitter $3.00

When ordering mention types
Shipped Parcel Post C.O.D.

BLUEBIRD TUBE CO.
200 Broadway Dept. N New York

Blue Ribbon Restorations

"Old-time craftsmanship makes your radios new again"

- **Complete wood cabinet refinishing with proper shading & toning for that "factory-new" appearance**
- **Veneer repairs from patches to total cabinet re-veneer**
- **Pattern-matched veneer to simulate damaged photo-finished panels**
- **Bakelite repair and repainting**
- **Total electronic chassis restoration**
- **"Impossible" restorations taken on**
- **Fabrication of small wood items [radio or other]**
- **12 years' experience from an "award-winning radio craftsman"**

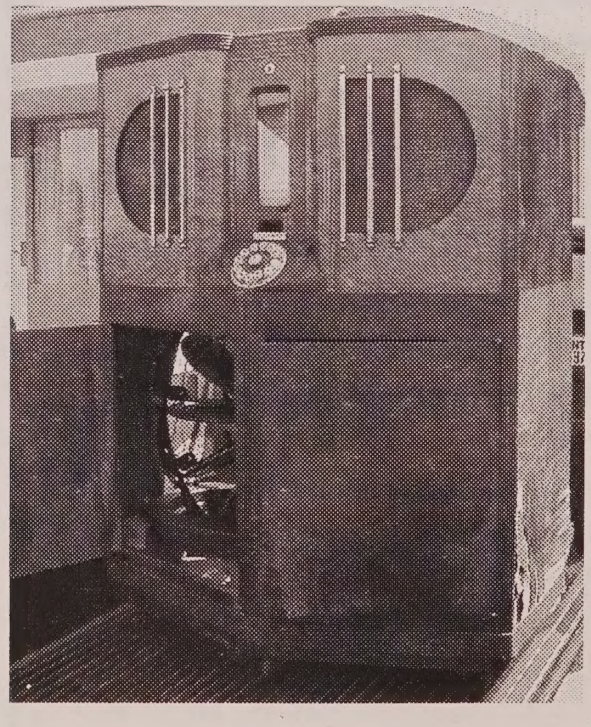
"Before you relegate that set to the parts bin, bring it to Blue Ribbon Restorations"

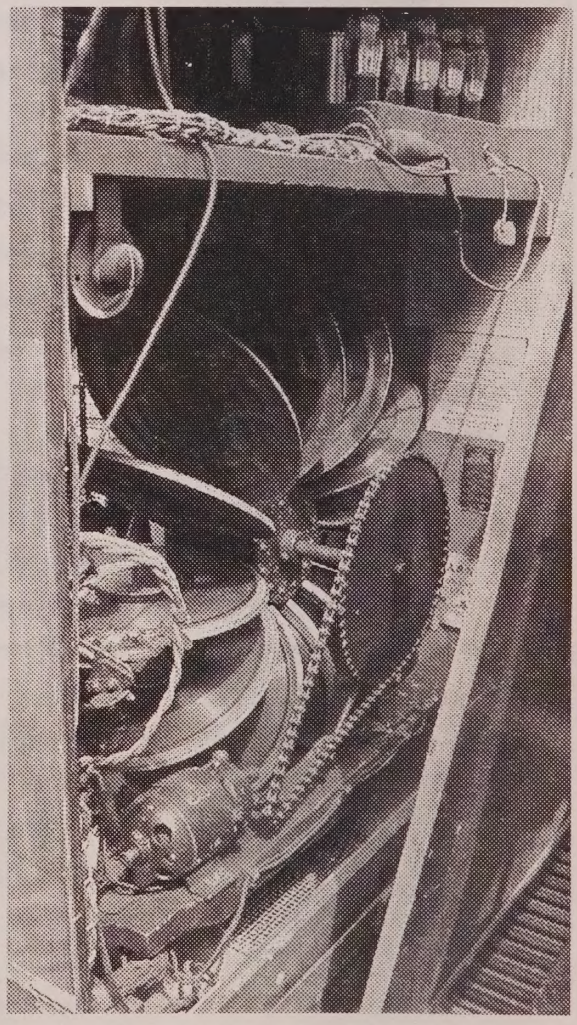
Ken Krol

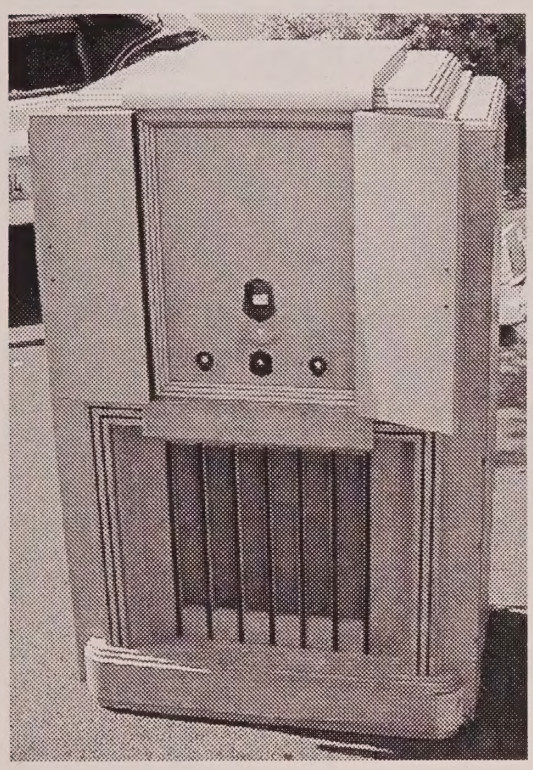
602.604.8853 djkrol@earthlink.net

FOR SALE: Volumes VIII through XVI Rider's Manuals - $100. To be picked up at 688 First St., Suite 4, in Tempe. I also have a new list of many types of early radio tubes on sale. See it at www.fathauer.com, or I can mail it by request. George Fathauer.

Last Half of
2002
in Review
•
Elgin, Illinois
Meet
A E S
PIONEERS IN RADIO







A few of the oddities at the August 2002 Elgin Meet, attendend by Bill Lettow.

At left is a jukebox with a "teledial" and a view of the tortuous mechanics for record changing.

Above an unnamed console in original "bone" finish.

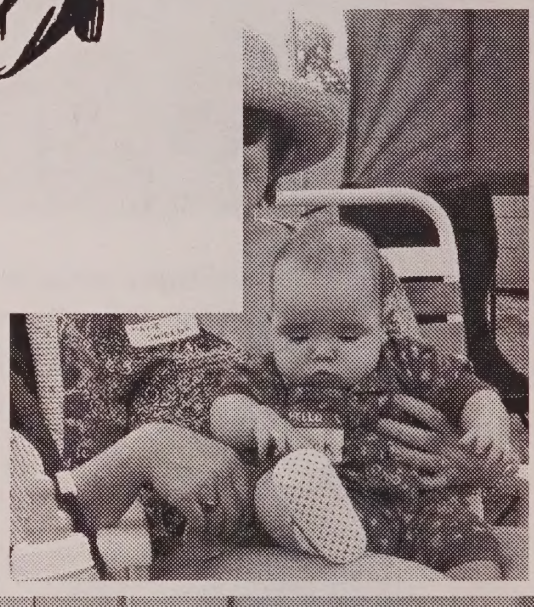
Above and right, a Scott Phantom chassis mounted in a reproduction Sparton Nocturne. Radio gigantism run amuck.

Last Half of
2002
in Review
•
W.E. Adams
Estate Sale

Kathy Watson provided these pictures of an estate sale held late in September 2002 in Sun City for the late W.E. Adams, an AARC Honorary Life Member. W.E. was a great experimenter and many of the items for sale bore the marks of his curiousity, which was still active into W.E.'s '90s.

Last Half of 2002 in Review

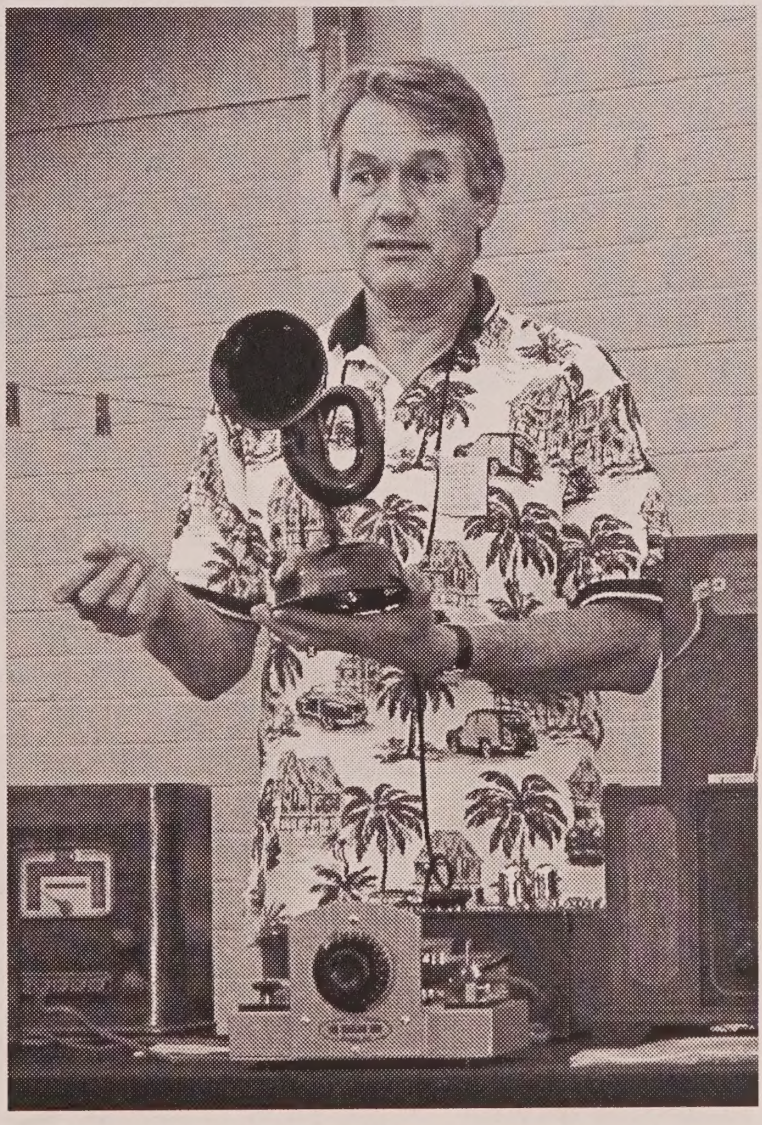
• October Potluck Picnic



In October we started the fall season with a potluck picnic at the Dennis Craft residence. The price of admission was a show-n-tell item, and we had some great ones.

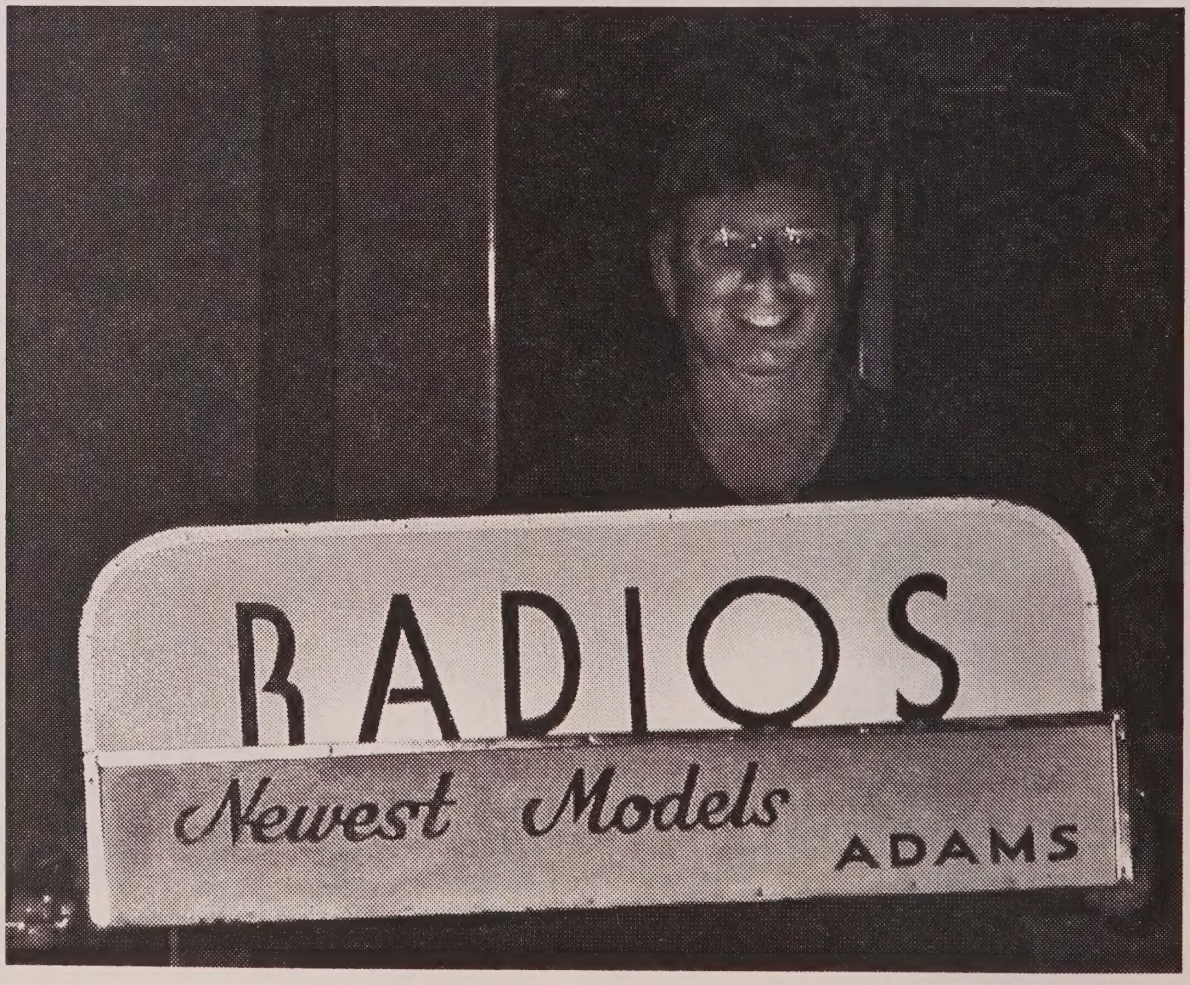
At left is Katie Shields with an obviously engaged and patient Patrick.
Above Clyde Watson talks about the Silver-Cockaday radio and kit he found.

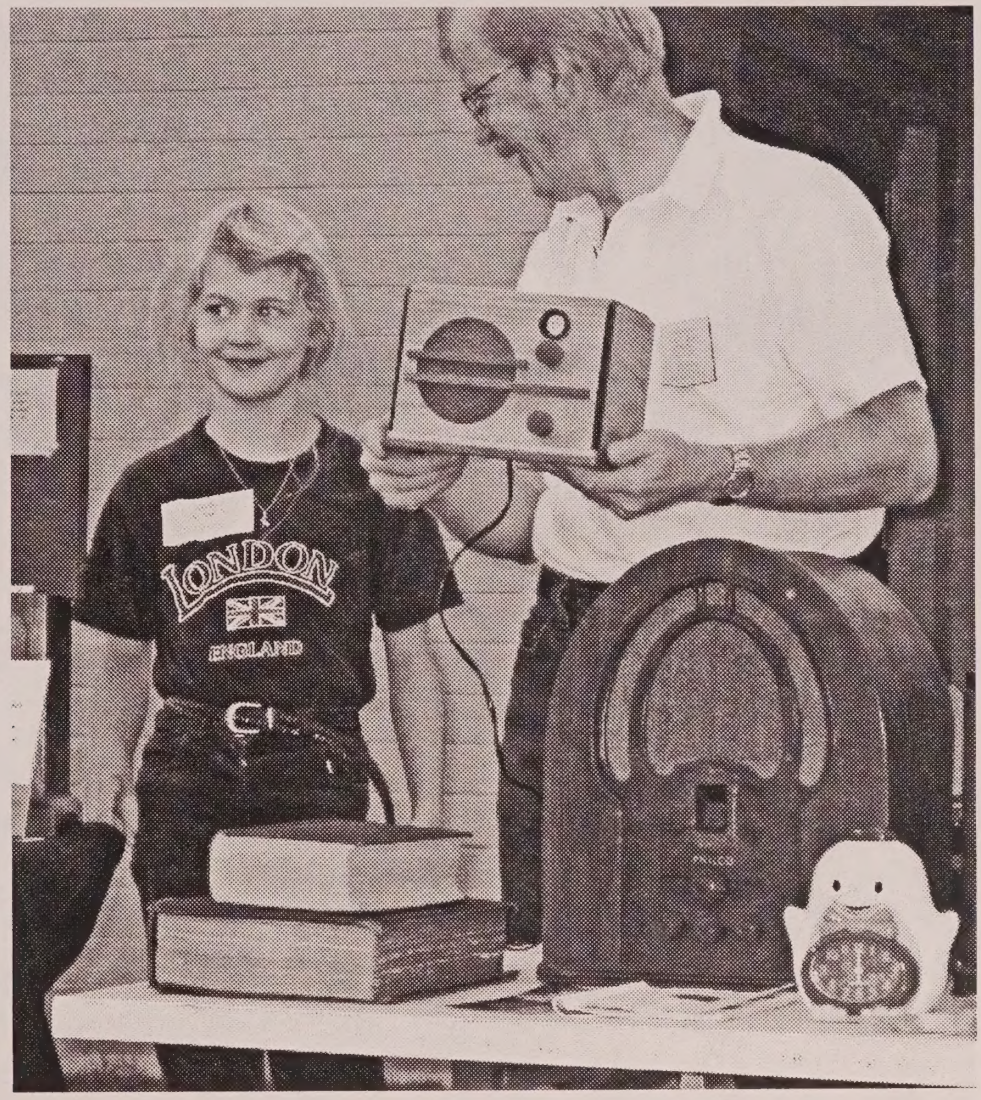
Bob Bakinowski shows off the unique Arkay Radio-horn featured on the cover of this issue.



Con Morton at left, Mark Toppo below and Carl Roberts below right were among the many who displayed outstanding sets. Mark may offer reproductions of this radio sign.

At right, a highlight of the show-n-tell. John Martin holds the '60s era kit radio built by his daughter Nicolle. She built the cabinet as well, with Dad's help. We expect more radios and other great things in the future from Nicolle.

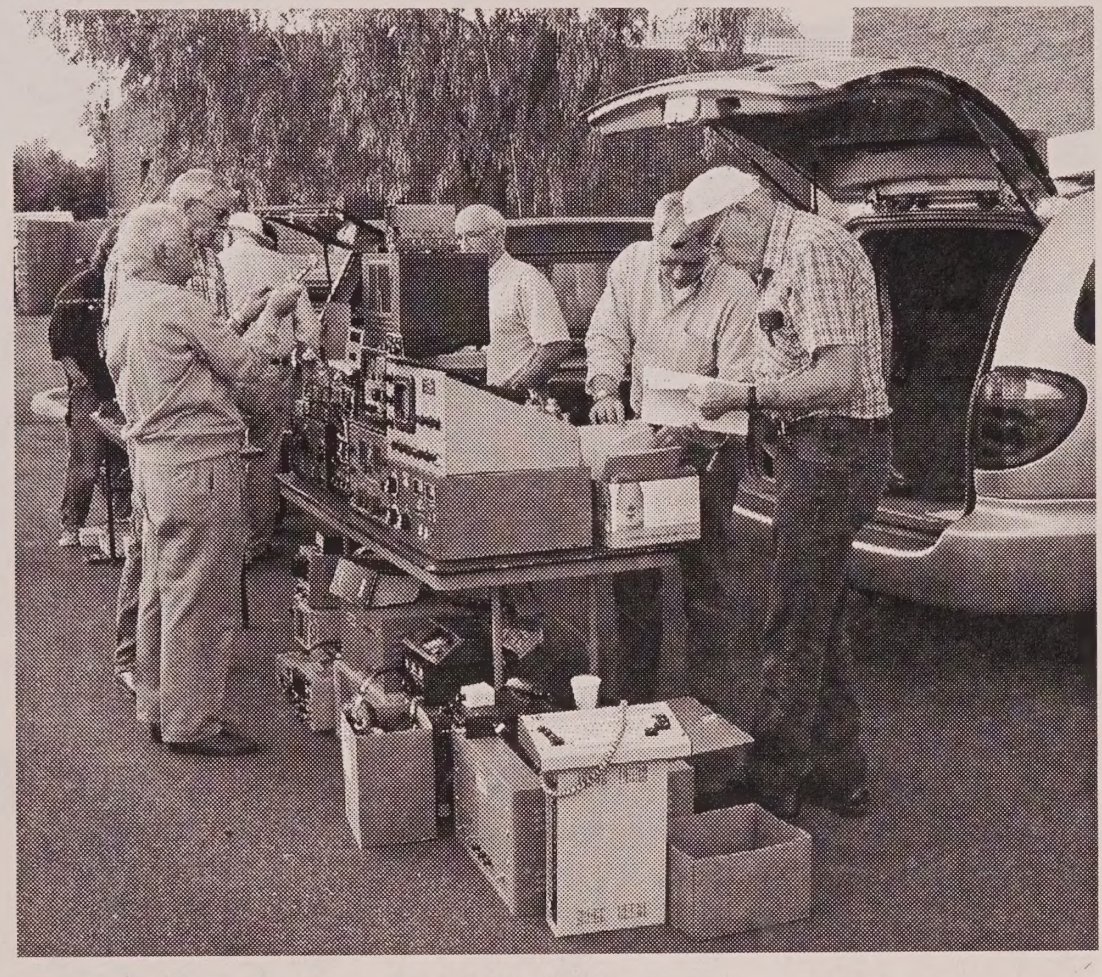



LONDON
ENGLAND

The items on these two pages and on the back cover of this issue are from a collection of paper items displayed by Emily Dimson. They were Sparton Radio advertising materials and they came from the estate of the graphic artist who designed them.

Sparton State to State Airplane Tour

Last year's Fall Swap Meet brought large crowds, a lively auction and new members for the club.



Who's in charge? Five cooks stir the stew at the auction. Items donated to the club for auction earned several hundred dollars.
Below, David Cain with a few wares.